

SOUNDBOX FOR ACOUSTIC CHARACTERISATION OF LIGHTWEIGHT PANELS



Location: FlandersMake@KULeuven

DESCRIPTION

The Soundbox is a non-standard test rig that allows the experimental evaluation of the acoustic behaviour of lightweight components for both airborne and structure-borne excitation in a quick and very practical way.

It consists of a concrete cavity of less than one cubic meter particularly shaped to ensure a desired distribution of the acoustic natural frequencies in the low frequency region. A test window at its front wall can host test specimen of different sizes and thicknesses to test for acoustic transmission. Furthermore, the test window can be fully closed to allow for acoustic characterisation of test specimen place within the Soundbox. The described system is a powerful tool to characterize and analyse novel materials and optimized lightweight components of non-standard size.

NVH & DURABILITY TESTING

TECHNICAL SPECIFICATIONS

Sample size	A4 up to 1 x 0.8m
Frequency range	50 Hz - 10 kHz, reverberant from 3.3 kHz
Measured quantities	<ul style="list-style-type: none">• Vibration levels• Sound pressure level• Acoustic intensity• Transmission loss• Insertion loss

OUR OFFER

- Evaluation of the acoustic behaviour of lightweight components for both airborne and structure-born excitation.
- Acoustic characterisation of materials (reverberant environment from 3.3kHz onwards).

INTERESTED?

Contact contact_DMMS@flandersmake.be for more information.